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ABSTRACT

As interest in tuition tax credits has increased, one of the central issues has become the likely loss (or cost) that would result from adopting such a plan. In this paper the author first analyzes the likely independent effects of changes in the four major characteristics of tax credits (scope of eligibility, maximum amount, proportion of costs covered, and refundability) on federal revenue loss, assuming no change in either enrollments or tuitions. First, each characteristic would affect the amounts of credits that families would receive and thus would affect overall federal revenues. Second, by altering the price of education to students, tuition tax credits could affect the behavior of both families and schools. The last section of the paper examines how characteristics of tuition tax credits, both independently and interacting with each other, would affect enrollment patterns and tuition costs and consequently federal revenues. A table summarizes how the characteristics of tax credits would affect who benefits, by how much, and what the result is in foregone tax revenues. (Author/MLF)

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PUBLIC COST OF TUITION TAX CREDITS

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July 1982

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Abstract

As Congress considers tuition tax credit legislation, one of the most central issues will be how much various proposals would cost--that is, how much federal revenues would decline as a result of the credits. Despite arguments of some policymakers that tax reductions should not be considered equivalent to directly appropriated expenditures, from a budgeting standpoint, reductions in revenues have the same effect on balancing a budget as increases in direct spending. And in a period of fiscal constraint, budget considerations will likely be weighed heavily as new legislation is considered.

The revenue loss resulting from tuition tax credits would depend greatly on four characteristics of the credits:

- .Who would be eligible for the credits.
- .How much they would be eligible for.
- .What portion of tuition costs would be covered by the credits.
- .Whether the credits would be refundable--that is, whether families paying tuitions that amounted to more than their taxes could receive a refund from the Treasury.

These four characteristics independently affect how much a family would receive under a specific tuition tax credit plan as well as how many families might choose to send their children to tuition charging schools and how much tuition these schools would charge.

For two decades the Congress has debated whether or not to provide tax credits to offset educational expenses. Legislative proposals to provide tuition tax credits have passed the Senate on numerous occasions (1969, 1971, 1976, 1977, and 1978), and in 1978 the House of Representatives, for the first time, also passed a tuition tax credit bill. No tuition tax credit was enacted in 1978, however, because the House and the Senate were unable to reconcile major differences between the two proposals, and because the Middle Income Student Assistance Act was enacted, which expanded federal post-secondary student assistance programs. The principal difference between the two bills was that the Senate bill would have provided tax credits to students in all levels of education, whereas the house bill would have limited benefits only to students in post-secondary education.

As interest in tuition tax credits has increased, one of the central issues has become the likely revenue loss (or cost) that would result from adopting such a plan. The plans that have been proposed in Congress in recent years would range in revenue loss from less than $1 billion annually to nearly $7 billion annually. If adopted, these credits would add to a list of education-related tax expenditures (including an exemption for post-secondary student dependents, an exclusion of fellowships and scholarships, an exclusion of GI bill education benefits, and deductibility of charitable contributions) that already reduce federal tax revenues by nearly $3 billion annually. Some argue that tax exemptions, credits and deductions should not be considered equivalent to direct budget expenditures because to treat such reductions in taxes like direct expenditures implies that the government is entitled to some specific level of revenues. From a cost accounting point of view, however, the two types of expenditures have the same budget effect--a dollar of foregone revenues affects the deficit or surplus no differently than a dollar of direct spending.

The revenue loss associated with tuition tax credits depends primarily on four characteristics of the credits:

- o The scope of eligibility--whether the credits cover all levels of education or only a portion, such as elementary and secondary education;
- o The maximum size of the credits;
- o The proportion of tuition costs covered; and
- o Whether the credits are refundable or nonrefundable--that is, whether lower-income families, for whom taxes are often less than the amount of credits, would receive a refund directly from the federal government to assure them the full benefit of the credit.

Depending upon the objectives of a tuition tax credit proposal, different decisions about these characteristics would be made.

Selecting a specific scope of eligibility can reflect a number of objectives. Limiting the credits to tuitions paid for private elementary and secondary education, for example, may reflect an interest in providing tax equity to families that pay taxes for public education but choose not to use those services for their children. Elementary and secondary tax credits are also advocated to preserve diversity in educational opportunities and to provide incentives to improve quality in both the public and private sectors. Expanding eligibility to post-secondary education may indicate an interest in providing general tax relief for the burden families face in paying for higher education costs.

Selecting the maximum size of the credits often reflects pragmatic cost considerations rather than philosophical concerns. Indeed, the revenue losses associated with tuition tax credits are highly sensitive to the maximum size of the credit. In general, past proposals have attempted to balance the desire to reduce families' financial burdens without generating large revenue losses.

Restricting tuition tax credits to only a proportion of tuition costs is done almost entirely to prevent schools from increasing their costs to capture the benefits that students' families would receive from the credits.

And, finally, the choice of whether the tax credits would be refundable or nonrefundable depends generally upon attitudes about how the tax system should be used. It is often proposed that tuition tax credits should be refundable, so

that lower-income families would be able to benefit fully from them. Many proponents of tuition tax credits feel that it is particularly important to assure that lower-income students have access financially to non-public alternatives because public schools in many lower-income neighborhoods have displayed difficulty in maintaining quality. Other policymakers, however, do not consider benefits provided through the tax system equivalent to benefits provided through direct funded federal programs because they do not concede that the government has an absolute right to a specified portion of individuals' earnings. Many of these policymakers, although often proponents of tuition tax credits, find it difficult to support refundable credits that would provide direct refunds for amounts in excess of taxes paid, because to do so would require using the tax system to distribute directly appropriated federal funds.

Each of these four characteristics would affect revenue losses in two ways.

First, each characteristic would affect the amounts of credits that families would receive, and thus would affect overall federal revenues. Broadening the scope of eligibility, providing larger maximum credits, or allowing them to cover a larger proportion of tuition expenses all would result in greater revenue losses. Similarly, providing refundable tuition tax credits would increase federal expenditures by the amount refunded to families whose credits would exceed their tax liabilities.

Second, by altering the price of goods (education) to consumers (students and their families), tuition tax credits could affect the behavior of both families and schools. A reduction in the net price of education resulting from tuition tax credits should increase the demand for these services. And, if more students attend tuition-charging schools, the revenue loss associated with the tax credits would increase. Enrollment effects would only occur, however, if the net price facing students and their families were altered. Schools might respond to the availability of tax credits by altering their pricing structure; that is,

they might increase tuitions to garner a portion of the credits' benefits for themselves. This could be accomplished without actually increasing the net cost of the education to their students' families. These price effects would alter revenue losses in two counteracting ways. On the one hand, increasing tuitions would increase the amount of the credits for which some families would be eligible. Only families who were not paying enough tuition to receive the maximum tuition tax credit before any increase in tuitions would receive higher tax credits after tuition increases. As a result, revenue losses would increase. On the other hand, higher tuitions would reduce the demand for tuition-charging education, which would reduce the revenue loss.

In this chapter, I focus almost solely on the revenue impacts of tuition tax credits. In this first section, I analyze the likely independent effects of changes in the four major characteristics of tax credits (scope of eligibility, maximum amount, proportion of costs covered, and refundability) on revenue loss, assuming no change in either enrollments or tuitions. In the second section, I examine how tuition tax credits are likely to affect both enrollments and tuition costs, and how these changes would affect revenue losses.

HOW VARIOUS CHARACTERISTICS OF TUITION TAX CREDITS AFFECT REVENUE LOSSES FROM ONE TUITION TAX CREDIT OPTION

Tuition tax credit plans can vary extensively in their associated revenue losses. As mentioned earlier, recent Congressional proposals have ranged in revenue loss from less than $1 billion to nearly $7 billion annually. The plans differ so radically in their budget effects because they differ radically in their characteristics. In the rest of this Chapter, I focus on how various elements of tuition tax credits affect tax revenues.

I begin by examining the revenue loss that would result from a relatively simple tuition tax credit plan--one that would allow taxpayers to claim a non-

refundable tax credit of up to $250 per child, not to exceed 50 percent of tuition expenses, for elementary and secondary tuition paid in any calendar year.[1] This plan would reduce federal revenues each year by approximately $1.0 billion in 1982 dollars (see Table 1).[2] Given current attendance patterns, middle-income and upper-income families would receive a somewhat disproportionate amount of the benefits (see Table 1). Approximately 60 percent of the benefits would go to families with 1982 incomes above the $23,500 median projected for families with elementary and secondary age children. This distribution would occur principally because the proposed credit would not be refundable and because children from higher income families currently are more likely to attend tuition charging schools.

TABLE 1. REVENUE LOSS ASSOCIATED WITH VARIOUS TUITION TAX CREDIT PLANS (In millions, 1982 dollars)

	Family Income			
	$0 - $14,999	$15,000 - $29,999	$30,000+	Total
Base Plan: $250 maximum nonrefundable credits, covering 50 percent of elementary and secondary tuition expenses	250	300	450	1,000
Alternative Plans				
Including full-time post-secondary tuition expenses	450	800	1,150	2,400
Increasing the maximum credit to $500	350	450	700	1,500
Reducing the proportion of tuition expenses covered from 50 percent to 25 percent	200	250	350	750
Make the credits refundable	300	350	500	1,100

Note: Rows may not sum to totals due to rounding. All estimates rounded to nearest $50 million.

The Impact of Changing Various Conditions

Altering any of the four characteristics of tuition tax credits would affect the revenue loss associated with a tuition tax credit. In this section, the likely revenue impacts of changes in each characteristic are analyzed, assuming no change either in enrollments in those schools or in the prices schools charge. Likely effects on enrollments and prices, and their subsequent effects on federal revenues, are discussed in the last section of this paper.

Changing Eligibility. Expanding eligibility for the tax credits beyond elementary and secondary education would significantly increase the revenue loss. Including full-time post-secondary students, for example, would increase the annual revenue loss in 1982 dollars from $1 billion to about $2.4 billion, an increase of approximately 135 percent (see Table 1). Despite the large benefit that would go to post-secondary students and their families, some would receive no credit and others would receive only relatively small amounts. How a tax credit accounts for other forms of student assistance could reduce or eliminate tax credit eligibility for many post-secondary students or their families, and thus could appreciably affect revenue losses. This plan assumes that other student aid is generally provided to defray all educational expenses, not just tuition costs. Therefore, the plan would reduce tuition costs from which tax credits would be determined by the portion of aid attributable to the tuition component of students' total educational budgets. Furthermore, many self-supporting (independent) students would pay little in taxes because they would have such low taxable income. These students, therefore, would not benefit much from nonrefundable credits.

Changing the Maximum Size of the Credit. Increasing or decreasing the maximum size of the credits would greatly affect the revenue loss. For example, doubling the maximum credit in the base plan from $250 to $500 per child would

increase the annual revenue loss to $1.5 billion, an increase of 50 percent (see Table 1).

The increase in benefits - and therefore in revenue loss - is not proportional to the increase in the maximum award for two reasons. First, the constraint on the proportion of tuition costs that the credit could cover would limit the effect of increasing the maximum credit. Regardless of the allowable maximum, the credits could not exceed 50 percent of tuitions paid under this plan. As a result, doubling the maximum from $250 to $500 would only double the credits for families paying tuitions over $1,000. Families paying tuitions of $500 to $1,000 (the range of tuitions for most nonpublic elementary schools), would receive more if the credit limit were doubled to $500, but they would not receive the full $500. Second, some low-income families would not benefit from an increase in the maximum credit because they would not owe $500 in taxes against which to claim the nonrefundable credit (or multiples of $500 in tax liability, if they had more than one child in nonpublic schools).

Changing the Proportion of Tuition Costs Covered. The effect of altering the proportion of tuition costs covered by a tax credit depends not only on the change in the proportion of tuition costs covered, but also on the maximum credit allowed.

With a maximum credit of $250, decreasing to 25 percent the proportion of tuition costs covered would reduce the revenue loss to $0.8 billion, a decline of 25 percent (see Table 1). The amount of the credits would not change for families paying $1,000 or more in tuition--with credits constrained to either 25 percent or 50 percent of tuition, these families would receive the $250 maximum. For families paying tuitions below $1,000, on the other hand, credits would be reduced, with the amount of reduction increasing as the tuition costs

declined. Credits for any families paying tuitions below $500 would be reduced by 50 percent, proportional to the reduction in the proportion of tuition costs covered.

If the maximum credit amount were higher than $250, altering the proportion of tuition expenses covered would affect the associated revenue losses much more significantly. With a maximum credit of $500, for example, changing the proportion of tuition expenses covered from 50 percent to 25 percent would decrease the associated revenue loss by approximately $500 million (33 percent). This change would affect credit eligibility for all families paying tuitions less than $2,000, which includes most families with children enrolled in nonpublic elementary and secondary schools.

With a $250 maximum credit, increasing the proportion of costs from 50 percent to 100 percent would increase only minimally the amount for which families would be eligible because the original 50 percent constraint would affect only families with tuition expenses below $500, and most nonpublic schools already have tuitions above that amount. If the maximum credit were $500 or more, however, increasing the percent of costs covered from 50 percent to 100 percent would more significantly increase costs because many families that would have been constrained by the 50 percent limit would receive more if that constraint were removed. Furthermore, increasing the percent of costs covered for a larger credit provides greater incentives for schools to increase their tuitions, a phenomenon discussed in the last section of this paper.

Making the Credit Refundable. Making the credit refundable would add an additional $0.1 billion in costs for tax credits, an increase of about 8 percent (see Table 1). Lower-income families would benefit proportionately more than others because they owe less in taxes and thus would receive most of the refunds.

THE EFFECTS OF TUITION TAX CREDITS ON ENROLLMENT PATTERNS AND TUITION COSTS

Because tuition tax credits could alter the net cost of attending nonpublic schools, they could affect how many families would send their children to these schools, as well as how much tuition the schools would charge. Either change would affect the revenue loss associated with the tax credit.

The Effects on Enrollments

Any changes in enrollments resulting from implementing a tuition tax credit plan would depend upon the interaction between increases in both the demand for and supply of tuition charging educational alternatives.

Any increase in the demand for nonpublic education will depend primarily on two factors: The strength of families' preferences for various types of education, and the net change in the price of nonpublic schools. Families' preferences would to a great extent determine any increases in demand. Some parents prefer public to nonpublic schools, and the availability of tuition tax credits would not affect enrollment decisions for these families' children. Neither would tuition tax credits affect enrollment decisions for families that prefer nonpublic schools enough to send their children to them now. Some families, however, may prefer to send their children to nonpublic schools, but not enough to pay the required tuition, given the availability of free public education. Tuition tax credits could reduce net tuition costs sufficiently to entice some of these families to send their children to nonpublic schools. The number of families who would change their behavior would depend on the size of the tax credits.

Larger Credits Would Lead to Larger Changes in Enrollments. As the demand shifted, not only would enrollments increase, but so too would tuition costs. In economic terms, the shift in demand curves would result in a new equilibrium

point along the supply curve representing both higher enrollment levels (consumption) and higher tuitions (price).

How Would Tuition Tax Credits Affect the Availability (Supply) of Nonpublic Educational Opportunities? The extent of the increases in both enrollments and tuitions would depend on the willingness and capability of the nonpublic sector to absorb additional students. If nonpublic schools were willing and able to readily absorb additional students, most families wishing to enroll their children in nonpublic schools would do so, and tuition prices would not increase significantly. On the other hand, if nonpublic schools were not willing or able to absorb large numbers of new students, enrollments would not increase appreciably but tuition costs would.

Some marginal nonpublic enrollment increases could be achieved by filling excess capacity in existing nonpublic schools. The high cost of providing additional facilities and staff, however, could negate the likelihood of any appreciable enrollment shifts. Not only would a large increase in the size of the private sector require a large financial commitment to secure additional facilities, but it would also be costly to hire additional teachers--many of whom might not be willing to work at the low wage rates traditionally offered in the nonpublic sector. Furthermore, the average cost of existing programs could increase appreciably. Many current nonpublic teachers have voluntarily tolerated very low incomes in the past in order to support private education, but these teachers may recognize tax credits as a means to increase wages for themselves. In general, these conditions suggest that the relatively high marginal costs of providing more nonpublic education would tend to moderate enrollment shifts.[3]

How Would Tuition Tax Credits Affect the Demand for Nonpublic Educational Opportunities? Although the preceding discussion suggests that increases in nonpublic enrollments might be constrained by limits in the availability of spaces,

any actual change in enrollments would also depend greatly on how the demand for nonpublic services was altered by the tax credit. And obviously, any such change in demand would depend greatly on the specific characteristics of the credit--that is, on who would be eligible, how large the credit would be, and whether the credit would be refundable.

A credit that extends eligibility broadly, such as one applying to post-secondary tuitions as well as elementary and secondary tuitions, would increase enrollments in tuition-charging schools more than would a credit with restrictive eligibility criteria, simply because more students would be involved. In post-secondary education, however, two types of enrollment decisions could be affected:

- o Whether to attend college; and
- o Whether to attend a high cost or low cost college.

Available evidence suggests that tuition tax credits would not likely affect many students' decisions about whether or not to attend college. Studies have indicated that changes in post-secondary tuitions have relatively little effect on enrollments. One reason for this may be that tuition represents only a portion of most post-secondary students' opportunity costs for attending school. In addition to tuition, living expenses, and other education-related expenses, foregone earnings represent a large opportunity cost for post-secondary students, that may be a critical factor affecting whether they go to school or not. Similarly, tuition tax credits, unless quite large, would not likely have a significant effect on many students' decisions to attend high cost rather than low cost schools because the variation in cost would generally be much greater than the benefit available through the credits. It is possible, however, that some families might use the credit to "upgrade" somewhat the types of nonpublic schools to which they send their children. Any such behavior would increase the revenue loss.

Increasing the size of the credit to families, either through increasing the maximum credit or increasing the proportion of tuition costs covered by the

credit, would also increase enrollments in tuition-charging schools. Larger credits would more greatly reduce net tuition costs, which would increase the demand for nonpublic education.

Whether the credit would be refundable or not could also significantly affect how many families would transfer their children from public to nonpublic schools. All else being equal, lower-income families might be more responsive to tuition changes than other families for two reasons. First, the before-credit tuition expenses represent a larger portion of poor families' available resources, thus each dollar reduction is proportionately more important to these families. Second, private alternatives may be particularly attractive, if affordable, to low income students in ghetto public schools that have been unsuccessful in overcoming failure. Most lower income families, however, would receive the full value of the credit only if it were refundable, because they do not pay enough in taxes to benefit fully from a nonrefundable tax credit. Consequently, a refundable credit would no doubt have a greater effect on enrollment in nonpublic schools than would a non-refundable credit.

Little or no research has been done to estimate the likely effects on nonpublic elementary and secondary enrollments due to changes in the net tuition prices of nonpublic schools. I examine three possible scenarios: one in which nonpublic enrollment is assumed to be highly sensitive to tuition prices, one in which nonpublic enrollments is assumed not to be highly sensitive to tuition prices, and one in which the sensitivity of nonpublic enrollment to tuition costs is assumed to vary, depending upon family income.

Scenario I--Assuming Enrollment is Highly Sensitive to Tuition Prices. If enrollment for nonpublic schooling is highly sensitive to tuition prices, then any change in net costs created by tuition tax credits would significantly increase enrollments in nonpublic schools, thus significantly increasing the federal revenue

loss. For example, if enrollment were to increase proportionately to the decrease in net costs (reflecting an enrollment elasticity of 1.0), enrollment for elementary nonpublic education under the base plan would increase by approximately 40 percent, and secondary nonpublic enrollment would increase by approximately 20 percent.[4] If this full effect were to occur, nonpublic enrollments would increase by about 1.7 million students, an increase of one-third. The federal revenue loss would increase from $1.0 billion to $1.3 billion.

Scenario II--Assuming Enrollment is Not Highly Sensitive to Tuition Prices. If nonpublic enrollment is not sensitive to tuition prices, then the reduction in net costs created by tuition tax credits would not appreciably increase enrollments, and thus the revenue loss would not increase significantly. If the proportional change in elementary and secondary enrollments were only 20 percent as large as the proportional change in costs (reflecting an elasticity of 0.2, which is about the maximum effect measured within post-secondary education) then a $250 tax credit would increase elementary enrollments by about 8 percent and secondary enrollments would increase by about 4 percent. Overall, approximately 300,000 students would transfer from public to nonpublic schools, and revenue losses would increase from $1.0 billion to $1.1 billion.

Scenario III--Assuming Enrollment's Sensitivity to Tuition Prices Varies by Income. The effect of changes in price on enrollments very likely differs by family income. High income families' enrollment decisions are unlikely to be affected by changes in price; if children from these families are not already enrolled in nonpublic schools, it is almost certainly not for financial reasons. It may be, for example, that they prefer public schools, which are often of high quality in high-income neighborhoods. Changes in price would more likely affect the decisions of middle and lower-income students, although the likely magnitude of effects is by no means clear. As alluded to earlier, enrollment decisions of some low-income

families would likely be affected by a net change in the price of nonpublic education, both because any price change would significantly affect these families' discretionary resources and because the public schools in low-income neighborhoods often have relatively poor reputations. A critical factor for these families would be whether or not the credit would reduce the costs of nonpublic education sufficiently to remove financial barriers to attendance. The effects of price changes on middle-income families' enrollment decisions would probably fall somewhere between those of high and low income families.

This scenario assumes that high-income families enrollment decisions are totally unrelated to tuition prices (enrollment elasticity = 0), low-income families decisions are highly sensitive to costs (elasticity = 1), and middle-income families decisions are moderately sensitive to costs (elasticity = 0.2, similar to those measured in post-secondary education). Under these conditions, a $250 tax credit would increase nonpublic enrollments by approximately 8 percent. As a result, the revenue loss would increase from $1.0 billion to $1.1 billion.

The Effects on Tuitions

Tuition tax credits would produce strong incentives for existing nonpublic elementary and secondary schools to raise their tuition prices. By raising tuitions and thus garnering some or all of the benefit from the tuition tax credits, schools could moderate the pressure to increase their other revenue sources such as contributions and volunteer services. At present, tuition revenues cover only a portion of educational costs. Tuitions, which will average $600-$650 for elementary and $1,200-$1,300 for secondary nonpublic schools in 1982, are far below the national average per pupil expenditure of $2,100 for public school students. This wide disparity between nonpublic tuition charges and public per pupil expenditures gives some idea of the extent to which the nonpublic sector relies on other revenue sources. Any increase in tuitions (price response) resulting from

implementing a tuition tax credit would depend greatly on how the credit were designed.

With one notable exception, the likely price response would be unaffected by the tax credit's scope of eligibility. In other words, whether the credit covered only elementary and secondary tuition costs or post-secondary tuition costs as well, would have little impact on how much tuition charges increased to absorb the benefit from the credit. The notable exception occurs, however, when the scope of eligibility applies only to a portion of the families with children attending specific kinds of schools. If only some students and families are eligible for the credit, then the incentive for schools to increase tuitions is moderated appreciably, because any tuition hike would harm those families not receiving the credit. It is generally felt, for example, that one reason why post-secondary educational costs did not rise precipitously as federal student assistance mushroomed during the early 1970s may have been that the aid focused only on the most financially needy students; any rapid price increase, therefore, would have increased the burden on middle and upper-income families with children in college. One way to prevent an increase in tuitions, therefore, would be to restrict eligibility to only a portion of the students attending each level of schooling.

The interaction between two other characteristics of tax credits--the maximum size of credits and the proportion of tuition costs covered by the credits--would also likely affect how much schools increase tuitions, because these two factors would affect how much schools could benefit from each student. Larger credits, in general, would lead to larger price responses. Under some conditions, the provision limiting credits to no more than a specified proportion of tuition charges would constrain the price response. Limiting the credit to 50 percent of tuition, however, would still allow schools to raise tuitions by up to 100 percent (not to exceed the maximum credit) without increasing families' net costs. Reducing the

proportion of tuition expenses covered by the credit below 50 percent, however, would reduce the amount that schools could increase tuitions without increasing families' net costs. If the credit were limited to 25 percent of tuition, for example, schools could increase tuitions only 33 percent (or equal to the maximum credit, whichever is less) without increasing families' net costs.

Although almost any tuition tax credit would produce strong incentives to schools to increase their tuition prices to absorb at least a portion of the benefit, such tuition increases would not greatly affect federal revenue losses. Rather, the benefit of the credit would simply shift from the families claiming the credit to the schools in which these families' children are enrolled.

With a tuition tax credit of $250, most schools could increase their tuition by $250 without increasing the net cost of the education for most of their students' families. In this section, I examine the effects on federal revenues of two possible price responses: one that assumes that schools increase tuitions equal to the amount of the tax credit, and one assuming that the benefit from the credit is shared equally between schools (through increased tuitions) and students' families (through reduced net costs).

Scenario I--Assuming Schools Increase Tuitions by an Amount Equal to the Maximum Tax Credit. If schools increased their tuitions by the full $250 amount of the tax credit, most families' net costs of educating their children would not change. Rather, the benefits from the credits would be passed on entirely to the schools, which could increase their tuition revenues by more than 35 percent through this action. Because families' tax credit eligibility would not increase, overall federal costs would not increase either.

There would be two situations in which schools could not raise tuitions by the full $250 without increasing the net price to some of their students' families. First, if tuition were increased by $250, families currently paying tuition of

less than $250 would fare less well. But almost all schools currently charge more than $250 per year, thus very few families would fall into this category. Second, unless the credit was refundable, any tuition increase would increase the net cost for families owing less in taxes than they would be eligible for in tax credits. Schools could adjust for this problem, however, by using a portion of the increased tuition revenues for student aid to offset any possible net cost increases for low-income families.

Even though it appears that schools could raise tuitions appreciably without increasing the net cost to their students' families, there is little doubt that many families would be very displeased if they received no personal reduction in financial burden from the tuition tax credits.

Scenario II--Assuming Schools Increase Tuitions by an Amount Equal to Half the Maximum Tax Credit. Schools could split the benefit equally with their students' families by increasing tuitions by one-half the amount of the tax credit--$125. As with Scenario I, this plan would not increase federal revenue losses. Rather it would simply affect who would benefit from the credit--in this case, both the schools and their students' families would come out ahead.

The Interation Between Increases in Enrollment and Increases in Tuitions

I have suggested that tuition tax credits would not likely lead to appreciable increases in nonpublic school enrollments but might lead to significant increases in tuitions. In addition to the rationale established independently for these likely degrees of response, the interaction between prices and enrollments further reinforces this conclusion. If tuition prices increase, thus maintaining the net price of nonpublic educational opportunities, there will be little or no financial incentive for families to transfer their children from public to nonpublic schools.

Overall, therefore, the federal revenue loss would probably be only slightly higher than reflected in the revenue loss estimates that assumed no behavioral

response in either enrollments or prices. The minimal increases in enrollments expected in response to tuition tax credits of $250 to $500 would only marginally affect the revenue loss. Furthermore, any increases in tuitions, even if quite large, would have little direct effect on federal revenues, and could in fact reduce the enrollment response, thus moderating the effects of the tuition increase on the revenue loss.

A number of factors, however, could lead to more precipitous changes in nonpublic enrollments, which would thus increase the federal revenue loss.

For example, larger tax credits would provide greater incentives for families to enroll their children in nonpublic schools and would make it more financially feasible for new nonpublic institutions to evolve. And, indeed, if a tuition tax credit were adopted, there would almost certainly be pressure to increase its value. Virtually all legislative proposals, for example, would initially begin with relatively limited credits but would provide significantly larger credits in later years. Such increases in tuition alone would result in higher federal revenue losses. Increasing the maximum credit from $250 to $1,000 for elementary and secondary education, for example, would double the revenue loss from about $1 billion to $2 billion. And in addition, the larger tax credit would no doubt induce some additional increase in enrollments, which would further increase the revenue loss.

Another factor that could increase the federal revenue loss would be general changes in attitudes toward public and private education. If home study, for example, were to gain in popularity, enrollments in both the traditional public and nonpublic sectors could decline more than expected, although the eligibility for tax credits would increase.

CONCLUSION

The revenue loss that would result from enacting tuition tax credit legislation could range from a modest amount to a quite substantial amount, depending

upon the design of the specific tax credit plan. This chapter has examined how various characteristics of tuition tax credits, both independently and in interacting with each other, would affect revenue loss. Table 2 provides a summary description of how various characteristics of tax credits would affect who benefits, by how much, and what these would mean in foregone tax revenues.

A modest tuition tax credit plan--reflecting such characteristics as restricted eligibility, small maximum credits, or tight limits on the proportion of costs covered by the credits--would result in only a modest loss in tax revenues. For this reason, such plans have become particularly attractive during times of fiscal constraint, such as the nation now faces. This no doubt helps explain the modest approach proposed by the Reagan administration, which would limit credits to 50 percent of elementary and secondary tuition expenses, up to a maximum credit initially of $250.

Providing relatively little, however, also accomplishes relatively little. Most families who send their children to tuition-charging schools would benefit little, if at all, from a modest credit because most of the benefit would pass directly through the families to the schools in the form of increased tuition charges. Because the net price facing families would not be reduced significantly, a modest plan would not have much effect on non-public enrollments. The credits would not provide enough incentive to promote new alternatives for education, nor would they stimulate many families to transfer their children from public to nonpublic schools or from low tuition to higher tuition non-public schools.

Modest initial tuition tax credits, however, could evolve into much more generous plans; and substantial tax credits would result in quite large revenue losses. The most generous recent tax credit proposal placed before Congress, sponsored by Senators Packwood and Moynihan, for example, would initially be quite modest in scope, but would eventually provide approximately $7 billion annually in tax relief to families already sending their children to tuition-

charging schools; and in addition, benefits would accrue to families that decided to transfer their children from public to non-public or from low-cost to higher cost schools.

Under a generous tuition tax credit plan, schools would remain a principal beneficiary because they could charge appreciably higher tuitions without increasing the net price to families with children in their schools. Larger credits, however, would also provide stronger incentives for creation of new schools as well as for expansion of existing schools, and this increase in competition would help moderate price increases in existing schools. Therefore, families would most likely receive a larger share of the total benefit under a generous tuition tax credit plan than they would receive under a less generous plan. Because the benefits to families would be larger, there would also be a stronger incentive for increased participation in non-public education, which would obviously result in a requisite increase in the associated revenue loss.

TABLE 2

SUMMARY OF HOW VARIOUS CHARACTERISTICS OF TUITION TAX CREDITS WOULD AFFECT: (1) FAMILIES' ELIGIBILITY; (2) NON-PUBLIC EDUCATIONAL COSTS (TUITION CHARGES); AND (3) NON-PUBLIC ENROLLMENTS AND ASSOCIATED REVENUE LOSSES

Characteristics Of Tuition Tax Credits	EFFECTS			
	On Eligibility For Credits	On Tuition Changes	On Enrollments	On Revenue Loss
The Scope of Eligibility	The scope of the plan defines who will be eligible for the credits.	The scope of eligibility can affect tuition charges. Restricting eligibility to only a modest portion of the students enrolled in any specific school would discourage the school from increasing tuitions to garner the benefits of the credit.	The scope of eligibility can affect enrollments. Restricting eligibility precludes any possible enrollment change for those groups excluded from eligibility.	The scope of eligibility greatly affects the revenue loss. The larger the scope of eligibility, the greater the revenue loss will be.
The Size of Maximum Credits	The maximum credit size does not affect whether families benefit. It does affect the amount for which families are eligible, but only for families receiving the maximum.	The maximum credit size almost certainly affects tuition changes. A large portion of any tuition tax credit would very likely be absorbed by institutions through increased tuition changes.	The maximum credit size would affect non-public enrollment. The actual change in participation patterns depends on the net change in the price of non-public education facing families, thus enrollment changes depend on changes in tuitions as well as on changes in the maximum credit size.	The maximum credit size affects the revenue loss. The extent of the change depends on: (1) how much more each eligible family receives; and (2) how many more families enroll their children in non-public schools.

TABLE 2 (Continued)

Characteristics Of Tuition Tax Credits	EFFECTS			
	On Eligibility For Credits	On Tuition Changes	On Enrollments	On Revenue Loss
The Proportion of Costs Covered by the Credit	The portion of costs covered does not affect whether families benefit. It does affect the amount for which families are eligible, but only for families not already eligible for the maximum amount.	The portion of costs covered greatly affects tuition changes. Although increases in tuition changes will likely occur with any tax credit, restricting the credit to cover only a portion of tuition costs would likely moderate tuition increases.	The portion of costs covered can affect enrollments, particularly if the tax credit is allowed to cover most tuition expenses.	The proportion of costs covered affects revenue losses in two ways: (1) covering a larger portion of costs provides a larger benefit for some families, although in most cases the increase in benefits is marginal; and (2) covering a larger portion of costs could induce more families to opt for non-public education for their children.
Whether the Credits are Refundable or Non-Refundable	Making credits refundable expands eligibility by making it possible for low income families, which normally lack sufficient tax liability to claim the credit, to benefit from the credit.	Making credits refundable would not appreciably affect tuition changes.	Making credits refundable can affect enrollments, particularly in conjunction with other characteristics. Refundability can make it possible for lower-income families to enroll their children in non-public schools.	Making credits refundable increases the revenue loss, generally by 8 to 12 percent.

NOTES

[1] This credit resembles various plans that have been considered by the Congress in recent years. For example, the percent of costs covered (50 percent) and the maximum credit allowed ($250) coincide with those proposed in S. 550, the "Tuition Tax Relief Act of 1981," sponsored by Senators, Packwood, Moynihan, and others. In two important respects, however, this plan differs from that embodied in S. 550. First, this plan would limit eligibility for the credits to families incurring elementary and secondary tuition expenses; S. 550 would also extend credit eligibility to cover post-secondary expenses. Second, the plan discussed here assumes immediate implementation in all respects, whereas S. 550 would phase in expanded eligibility (eventually to include tuition expenses for part-time and full-time students, and for graduate and undergraduate students) and increase maximum credits, eventually to $500. In a May 29, 1981 letter from Dr. Alice Rivlin, Director of the Congessional Budget Office to the Honorable Daniel P. Moynihan, the CBO analyzed S. 550, estimating that the revenue loss would increase from $0.1 billion in fiscal year 1982 to $6.9 billion by fiscal year 1986.

[2] All estimates of revenue losses in this paper have been derived from the Congressional Budget Office's Student Assistance Cost Estimating Model (SACEM), a microsimulation model that estimates eligibility for federal formula-based assistance programs. The principal data base for SACEM is the Census Bureau's 1976 Survey of Income and Education, which has been updated to reflect current and projected economic, demographic, and enrollment conditions.

[3] For a discussion of why the marginal costs of increased enrollment should be considered about equal to average costs, see, Thayer H. Watkins, "In Multi-Plant Industries the Efficiently-Relevant Marginal Cost in the Minimum Average Cost of the Marginal Plant," Southern Economic Journal, pp. 149-155.

[4] Assuming average elementary tuition of $625, a decrease of $250 would represent a decline of 40 percent. Assuming average secondary tuition of $1,250, a $250 credit would decrease costs by about 20 percent.

Summary of

Public Costs of Tax Credits

David Longanecker

As the Congress considers tuition tax credit legislation, one of the most central issues will be how much various proposals would cost -- that is, how much federal revenues would decline as a result of the credits. Despite the arguments of some policy makers that tax reductions should not be considered equivalent to directly appropriated expenditures, from a budgeting standpoint, reductions in revenues have the same effect on balancing a budget as increases in direct spending. And in a period of fiscal constraint, budget considerations will likely be weighed heavily as new legislation is considered.

The revenue loss resulting from tuition tax credits would depend greatly on four characteristics of the credits:

- Who would be eligible for the credits;
- How much they would be eligible for;
- What portion of tuition costs would be covered by the credits; and
- Whether the credits would be refundable -- that is, whether families paying tuitions that amounted to more than their taxes could receive a refund from the Treasury.

A mixture of philosophical and pragmatic considerations generally dictate the specific set of characteristics selected for a tuition tax credit proposal. The revenue loss (or cost) associated with the credits is one of the most pragmatic considerations. Not only do the four characteristics independently affect how much families receive, but they also can affect how many families choose to send their children to tuition charging schools and how much tuition these schools charge.

* * * *

Based on "Public Costs of Tax Credits", prepared for the Tuition Tax Credit Seminar, October 22, 1981, Washington, DC, Institute for Research on Educational Finance and Governance, CERAS 402, Stanford University, Stanford, CA 94305 (415) 497-2754.

THE REVENUE LOSS FOR VARIATIONS OF ONE TUITION TAX CREDIT OPTION

A simple plan that would allow families currently sending their children to tuition charging schools to claim nonrefundable elementary and secondary tuition tax credits of up to $250 per child, not to exceed 50 percent of tuition payments, would reduce annual revenues by approximately $1.0 billion in 1982 dollars.

Expanding eligibility would increase the revenue loss. Including postsecondary tuition expenses for full-time students, for example, would increase the annual revenue loss to $2.4 billion, an increase of about 135 percent.

The maximum size of credits also greatly affects the revenue loss. Doubling the maximum credit to $500, for example, would cut revenues by an additional $500 million, an increase of 50 percent in the revenue loss, whereas quadrupling the maximum credit to $1,000 would reduce revenues by another $500 million, bringing the total revenue loss to $2 billion dollars. The increase in revenue loss would not be proportional to the increase in maximum credits because other characteristics of the credit (principally the percent of tuitions covered by the credits and the nonrefundability provision) would constrain growth in the average size of the credits.

Although most Congressional tuition tax credit proposals during the past few years would have limited credits to $500 or less, two factors would create pressure to increase the maximum size of future credits. First, tuition increases cost by inflation would also create pressure to increase tax credits. Second, the scope of federal programs, once enacted, often expands. The recently-passed tax bill, for example, expanded benefits provided through a variety of tax expenditure provisions, including increasing the limits on tax deductible contributions to independent retirement accounts, increasing the capital gains exclusion for elderly who sell their homes, and increasing the child care credit. If enacted, similar pressure might mount to expand the size of tuition tax credits, in order to address specific objectives. For example, many families would need credits much larger than $500 to achieve the objecive of totally eliminating financial barriers to nonpublic education.

The proportion of tuition expenses covered by the credit can also affect revenue losses, although the specific effects vary greatly, depending on the interaction of this characteristic with other characteristics. With a maximum credit of $250, for example, cutting the proportion of tuition expenses covered by the credit in half (from 50 percent to 25 percent) would reduce the revenue loss by $200 million, a 25 percent decline. The reduction in revenues would not be proportional to the reduction in the portion of costs covered because credits would be

reduced for only some families (those paying tuitions of less than $1,000). Because most families currently pay tuitions of more than $500, increasing the proportion of costs from 50 percent would have very little impact -- any family paying more than $500 in tuition would already have been eligible for the maximum $250 credit.

Making the credits refundable would add an additional $100 million to the revenue loss, an 8 percent increase. Most of the additional benefits would go to low-income families, who would owe relatively little in taxes, and thus, would not be eligible for the full tax credits unless they were refundable.

THE EFFECTS OF TUITION TAX CREDITS ON ENROLLMENTS AND TUITION COSTS

If tuition tax credits reduce the net price of nonpublic education, some shift in enrollments would occur from public to nonpublic schools. Larger changes in the net price would result in larger enrollment shifts. To the extent that changes in the four major characteristics of tax credits affect families' credits, either by increasing maximum credits, increasing the proportion of tuition expenses covered by the credit, or making the credit refundable, would increase enrollments, all else being equal.

Increases in nonpublic enrollments would increase the revenue loss. If enrollments proved to be highly sensitive to the availability of tuition tax credits, both enrollments and the associated revenue loss could increase by as much as one-third. Some evidence, however, suggests that enrollments may not be highly sensitive to tuition prices. Furthermore, the sensitivity of enrollment decisions to tuition prices no doubt varies by family income.

Depending on their design, tuition tax credits could produce a strong incentive for schools to increase their tuition charges. In the extreme case, schools could increase tuitions by the full amount of the credit, thus reaping the full benefit of the credit. Although most families with children in these schools would face no greater net after-tax price for educating their children, neither would they receive any of the intended reduction in financial burden. Perhaps a more likely scenario, therefore, would be that schools would increase tuitions enough to appreciate some benefit of the tax credit, but would still provide some reduction in net expenses for students' families.

Increasing tuition charges, however, would not significantly affect the revenue loss because in most cases it would not alter the credit amount that families could claim. In fact, tuition increases would moderate other anticipated increases in the revenue loss; by decreasing the net benefit of the tax credits to families, tuition increases would moderate to some extent the potential shift in enrollments from public to nonpublic schools.